

FURUSE *et al.*, SN 10/085,002
Amdt. dated 02 August 2004
Reply to OA dated 01 April 2004

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IN THE SPECIFICATION:

Please replace the paragraph spanning pages 11-12 of Applicant's specification with the following clarified paragraph:

An embodiment of the invention will be explained below with reference to Figs. 1 to 5. Fig. 1 shows a plasma etching apparatus used in the invention. This plasma etching apparatus is of ECR type for radiating an electromagnetic wave from an antenna and generating a plasma by the interaction with the magnetic field. An antenna 3 of aluminum is arranged through a dielectric member 2 above a plasma processing chamber, i.e. an etching chamber in the case under consideration. The antenna 3 is connected, through a coaxial line 4 and a matching box 5, to a RF power source 6 for generating a UHF electromagnetic wave of 450 MHz. The dielectric member 2 inserted between the etching chamber 1 and the antenna 3 can transmit the electromagnetic wave from the RF power source 6. The outer peripheral portion of the etching chamber 1 is wound with solenoid coils 7 for forming a magnetic field in the etching chamber 1. A lower electrode 10 making up a sample stage for mounting a wafer 9 constituting a sample thereon placed is arranged under the antenna 3 in the etching chamber 1. The distance between the antenna (including a shower plate described later) and the lower electrode 10 is adjusted at about 30 mm to 100 mm. The space between the antenna and the lower electrode 10 constitutes a processing space, in which a plasma 13 is generated. The lower electrode 10 is connected with a RF biasing power supply 11 of 800 kHz for

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attaching energy enabling the ions in the plasma to enter the ion toward the wafer 9 and a DC power source 12 for electrostatically adsorbing the wafer 9 to the lower electrode 10. An exhaust port is arranged at the lower part of the etching chamber 1 and connected with an exhaust unit not shown. Numeral 8 designates a gas supply for supplying the processing gas into the etching chamber 1.

Please replace the paragraph beginning at line 11 on page 17 of Applicant's specification with the following clarified paragraph:

According to this embodiment, the gas supply holes 32 are all inclined at an angle (0), and therefore the charged particles 14 cannot be passed directly through the gas supply holes 32. The angle (0) is determined by the relational equation described above. At this angle, one of the openings of the gas supply holes 32 is invisible from the other opening in the direction perpendicular to the wafer. The charged particles 14 that have entered the gas supply holes 32, therefore, impinge upon the inclined surface of the gas supply holes 32 of the shower plate 31 at least once. Since the shower plate 31 is a conductor, the charged particles are neutralized by this bombardment. The processing gas in the gas chamber 33 is not ~~neutralized~~ transformed into plasma by the entry of the neutralized charged particles into the gas chamber 33.